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X ESTIMATES OF DAMAGE BY THE EUROPEAN CORN BORER
TO FIELD CORN IN THE UNITED STATES IN 1950 X

Compiled by E. W. Beck
Division of Cereal and Forage Insect Investigations

The European corn borer (*Pyrausta nubilalis* (Hbn.)) destroyed in 1950 an estimated 58,765,000 bushels of field corn. When average prices^{1/} received by farmers as of December 15, 1950, are applied, the crop loss value becomes \$84,912,000. The bushel loss is 19 percent and the dollar loss 24 percent, approximately, of the respective losses estimated for the year 1949.

The estimated production, value of production, and loss of crop for counties included in the estimate are given in table 1.

Borer population data on which the estimates are based were obtained through fall surveys by State agencies in 26 States, or 744 counties.^{2/}

The damage estimates were made for 1,001 counties; or 257 more than surveyed, through use of district averages or average populations of neighboring counties. The 1,001 counties comprise 71 percent of the total counties known to be infested by the corn borer in the United States. No estimates were made for counties if insufficient data were available or if the loss was considered negligible.

A loss in yield of corn of 3 percent per borer per plant, the index of damage used in previous years, was applied to populations of the borer in calculating loss in corn production. This index is based on loss caused by single or first generation borers, and is believed applicable in 1950 due to the failure of the second brood borers to develop over a considerable portion of the infested areas. However, in cases where the States had additional information on the status of the borer in 1950 which permitted them to reach an estimate which they considered more precise than that calculated on the basis of the 3 percent damage index applied to fall borer populations, or where they considered a different statistical procedure more applicable, the State estimate was used.

Production data as reported in December 1950 by the Crop Reporting Board of the Bureau of Agricultural Economics^{3/} were, with one exception, used as a basis for calculating losses.

1/ U.S. Bureau of Agricultural Economics. Prices received at high for year. Prices paid at new record. U.S. Bur. Agr. Econ., Agricultural Prices. 27 pp., Dec. 20, 1951.

2/ Beck, E. W. Status of the European corn borer in 1950. U.S. Bur. Ent. & Plant Quar., Insect Pest Survey, Spec. Sup. (1951, No. 1), 22 pp. Feb. 20, 1951.

3/ U.S. Bureau of Agricultural Economics. Acreage, yield, and production of principal crops. U.S. Bur. Agr. Econ., Crop Rpt. Bd., Ann. Sum. Crop Production, 97 pp. Dec. 18, 1950.

Table 1. - Estimates of damage by the European corn borer to field corn harvested in the United States in 1950

State	: Counties :		: Estimated data on corn grown for grain :					
	: Known to : Included :		: Value of : bushel :		: Value of : production :		: Loss of crop :	
	Number	Number	1,000 Bushels	Dollars	1,000 Dollars	1,000 Bushels	1,000 Dollars	1,000 Dollars
Connecticut	8	8	258	1.85	477	1	2	
Delaware	3	3	5,112	1.50	7,668	52	78	
Illinois	102	102	407,337	1.53	623,226	7,061 ^{2/}	10,803 ^{2/}	
Indiana	92	92	209,534	1.55	324,778	1,935 ^{2/}	3,000 ^{2/}	
Iowa	99	99	441,894	1.44	636,327	21,302	30,674	
Kansas	81	36	64,924	1.39	90,245	473	657	
Kentucky	83	14	11,982	1.56	18,692	488	761	
Maine	15	13	35	1.95	68	Tr	-	
Maryland	23	23	17,200	1.53	26,316	151	231	
Massachusetts ^{3/}	14	1	53	1.85	98	Tr	-	
Michigan	50	30	41,872	1.53	64,065	218	334	
Minnesota	86	81	155,472	1.37	212,997	8,310 ^{2/}	11,385 ^{2/}	
Missouri	75	33	80,099	1.39	111,337	1,013	1,408	
Nebraska	71	71	241,230	1.38	332,898	3,985	5,499	
New Hampshire	9	9	90	1.85	166	Tr	-	
New Jersey	21	21	6,642	1.57	10,428	73	115	
New York	60	60	9,460	1.68	15,893	62	104	
North Dakota	37	37	8,826	1.30	11,474	178 ^{2/}	232 ^{2/}	
Ohio	87	83	166,712	1.53	255,069	7,443	11,387	
Pennsylvania	67	67	48,958	1.62	79,312	636	1,030	
Rhode Island	5	5	40	1.85	74	Tr	-	
South Dakota	48	26	70,108	1.30	91,140	4,165	5,415	
Vermont	14	14	90	1.85	166	Tr	-	
Virginia	59	9	8,515	1.53	13,028	311	476	
West Virginia	43	4	693	1.59	1,101	19	31	
Wisconsin	71	55	53,428	1.45	77,470	889	1,289	
Total	1,323	1,001	2,050,564	-	3,004,513	58,765	84,911	

1/ Does not include 82 additional infested counties in 10 other States for which no estimates were made.

2/ State estimate.

3/ 1944 production data used.